

starter clutch cover to the starter clutch housing/alternator rotor assembly. Remove the cover.

2. Remove the rollers, the plungers and the springs.

3. Inspect the rollers for uneven or excessive wear. Replace as a set if any require replacing.

4. Inspect the driven gear, idler gear and reduction gears. Check for chipped or missing teeth; replace if necessary.

5. Inspect the driven gear needle bearing for wear or damage. Rotate the bearing by hand and check for roughness, noise or play. If the bearing is suspect it should be replaced.

6. Install the springs, the plungers and the rollers into the starter clutch housing (Figure 142).

7. Inspect the starter idler gear and shaft (Figure 143) for wear and damage. Replace if necessary.

8. Inspect the needle bearing (Figure 144) for wear or damage; replace if necessary.

9. Install the starter cover and the screws. Use an impact driver and tighten the screws (Figure 141).

10. Use a punch and stake each screw head into the groove next to each screw head.

RECOIL STARTER (70-110 CC)

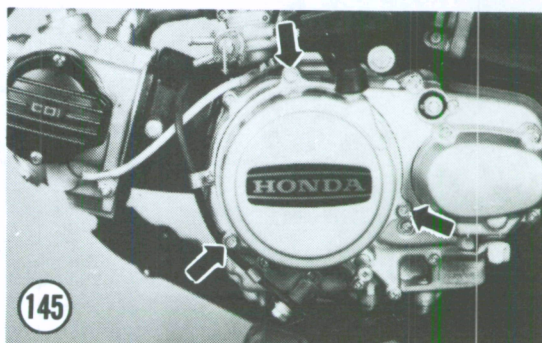
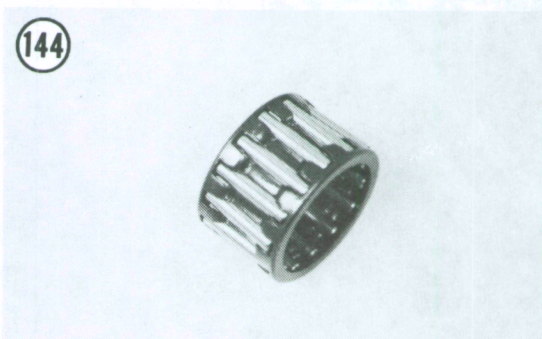
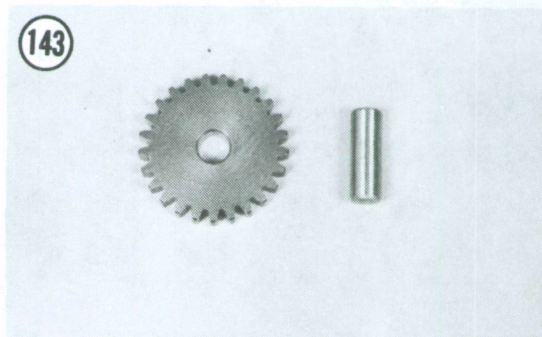
Removal/Installation

1. Place the ATC on level ground and set the parking brake or block both wheels so the vehicle will not roll in either direction.

2. Shift the transmission into NEUTRAL and remove the gearshift lever.

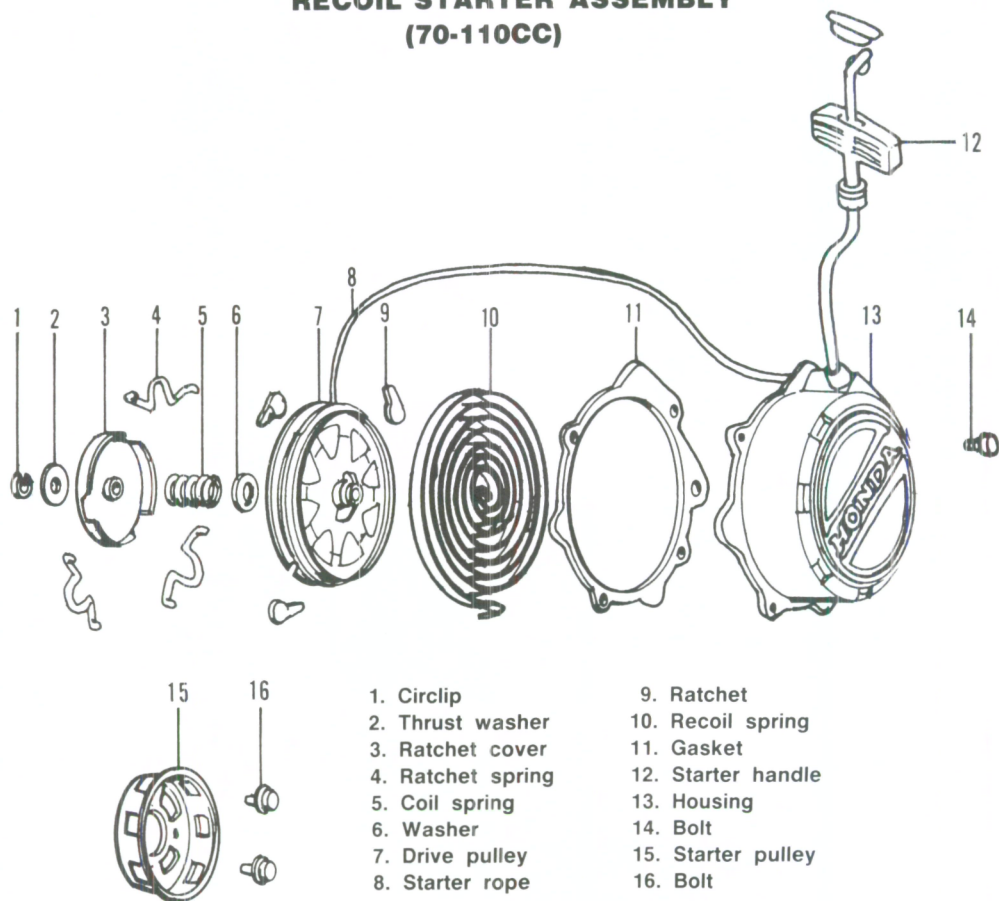
3. Remove the bolts (Figure 145) securing the recoil starter assembly and remove the assembly.

4. Install by reversing these removal steps. Make sure to install a new gasket on the assembly prior to installation.



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RECOIL STARTER ASSEMBLY (70-110CC)



Disassembly and Starter Rope Removal

NOTE

Consider replacing the Honda starter rope with an aftermarket vinyl coated flexible wire cable. These cables are available from many dealers and mail order houses.

Refer to **Figure 146** for this procedure.

WARNING

The return spring is under pressure and may jump out during the disassembly procedure. It is a very strong spring and may cut fingers or cause eye damage. Wear safety glasses and gloves when disassembling and assembling.

1. Remove and discard the gasket.
2. If the starter rope is still attached to the starter handle (the rope hasn't broken), tie a knot (A, Figure 147) in the rope and remove the starter handle.
3. Remove the circlip and thrust washer (B, Figure 147) and ratchet cover (C, Figure 147).
- 4A. On ATC70 models, remove the set spring, ratchets and the washer.
- 4B. On ATC90 and ATC110 models, remove the ratchet springs (A, Figure 148), ratchets (B, Figure 148), coil spring and washer (C, Figure 148).
5. Untie the knot and release the starter rope slowly into the housing.

WARNING

The recoil spring may jump out at this time—protect yourself accordingly.

6. Remove the drive pulley (D, Figure 148).
7. Untie and remove the starter rope from the drive pulley.

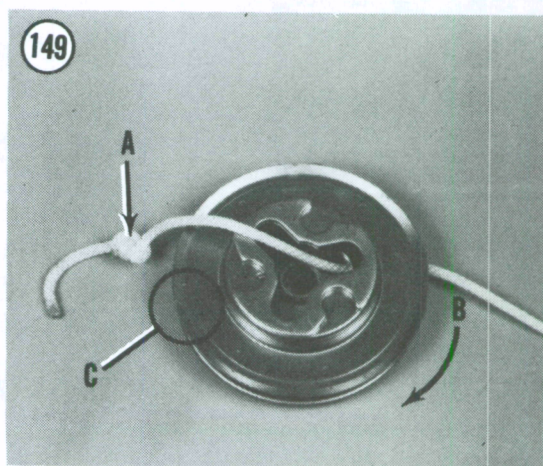
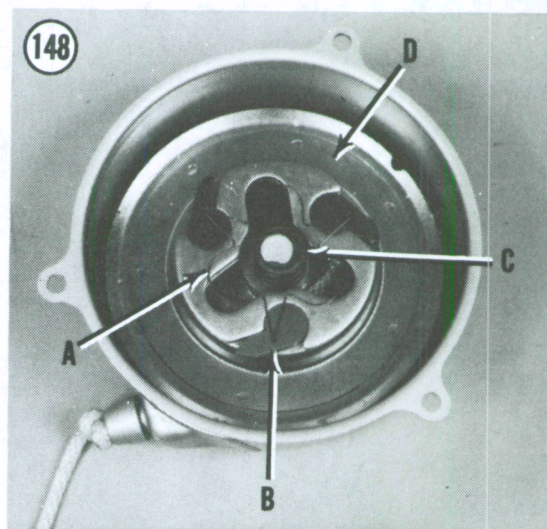
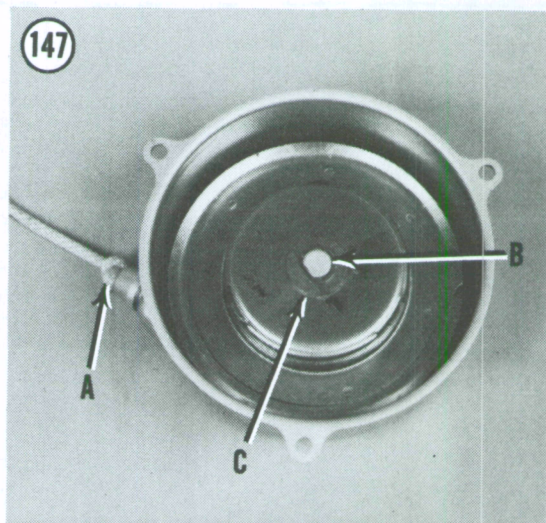
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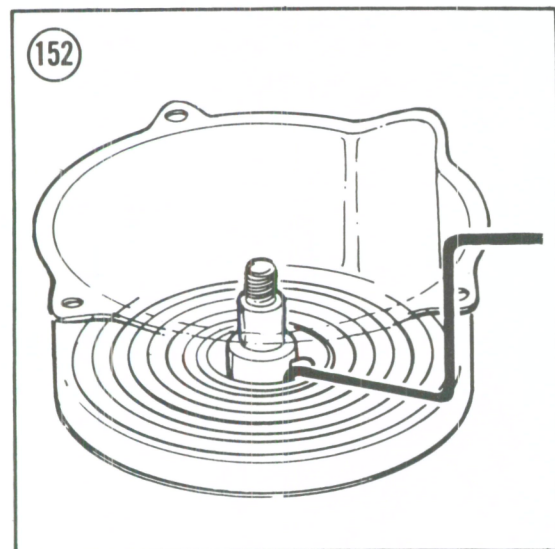
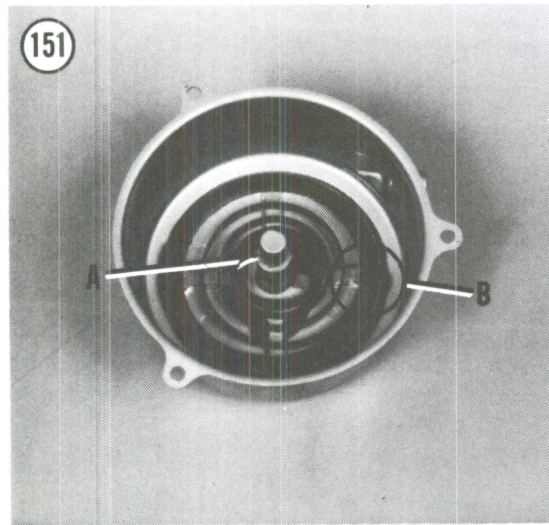
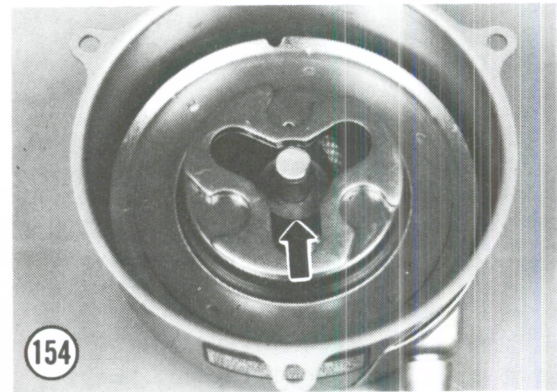
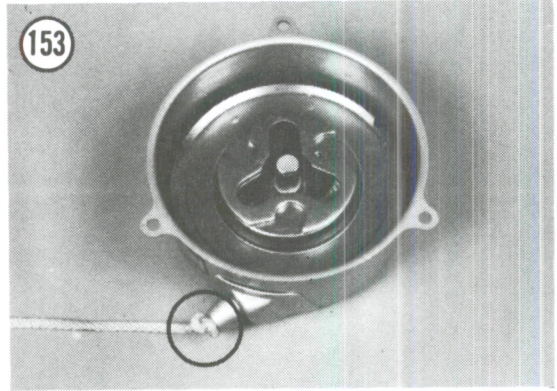
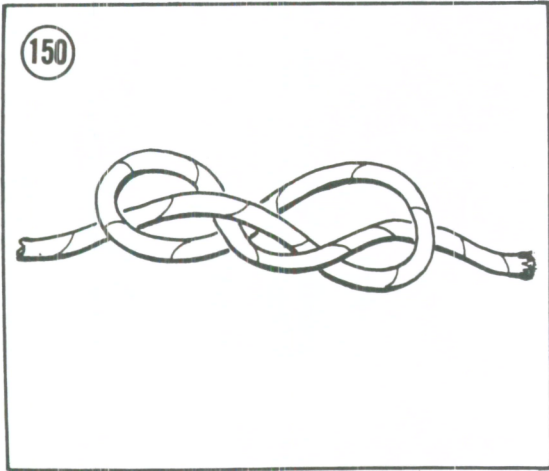
It is a good idea to replace the starter rope every time the recoil starter is disassembled.

8. Clean all parts in solvent and thoroughly dry.
9. Inspect all parts for wear or damage and replace as necessary.

Assembly and Starter Rope Installation

1. Install a new starter rope in the drive pulley (A, Figure 149) and tie a special knot at the end (Figure 150). Apply heat to the knot (a match is sufficient) and *slightly* melt the nylon rope. This will hold the knot securely.
2. Apply multipurpose grease to the housing shaft (A, Figure 151). Install the recoil spring into the housing. Hook the end of the spring onto the hook (B, Figure 151) in the housing.
3. Coil the rope onto the ratchet in a *clockwise* direction (B, Figure 149).
4. Position the end of the rope in the drive pulley so the starter grip end is located within the notch (C, Figure 149) in the drive pulley.
5. Install the drive pulley into the housing while rotating it in a *clockwise* direction. Make sure the rope is positioned up through the notch in the drive pulley. The pin on the bottom of the drive pulley must engage with the end of the recoil spring. If they engage, proceed to Step 8. If the 2 will not engage, remove the drive pulley and use the procedure in Step 6 and Step 7.





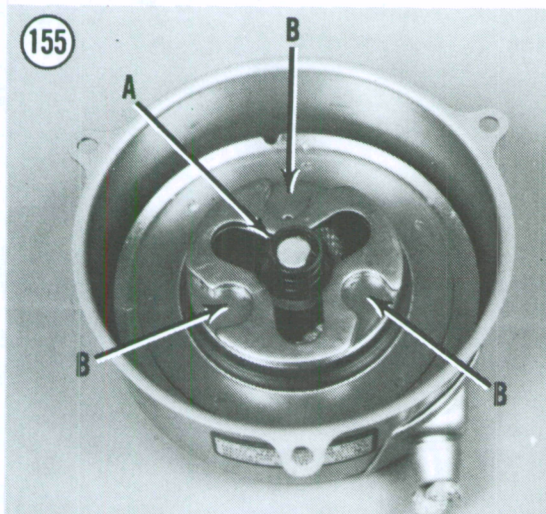
6. Make a *soft* wire hook (do not use stiff wire) and hook it onto the inner end of the recoil spring as shown in **Figure 152**. The other end of the hook must lay flat on top of the spring coils to allow the drive pulley to drop into position. The wire must be long enough so it can be pulled on.

7. Reinstall the drive pulley into the housing while rotating it in a *clockwise* direction. Make sure the rope is positioned up through the notch in the drive pulley. When the drive pulley comes into contact with the recoil spring, pull sideways on the hook to bring the inner end of the recoil spring away from the shaft in the housing. Continue to rotate the drive pulley and push it the rest of the way down until it seats and engages with the spring hook. Pull the soft wire hook out from between the drive pulley and the spring.

8. After engagement with the spring, rotate the drive pulley 2 turns *clockwise* to preload the recoil spring.

9. Hold onto the drive pulley and feed the rope out through the hole in the housing. Secure the rope with Vise Grips or tie a knot in it (**Figure 153**).

10. Apply a light coat of multipurpose grease to the washer and install the washer (**Figure 154**) and coil spring (A, **Figure 155**).



11. Apply a light coat of grease to the areas where the ratchets ride (B, **Figure 155**).

12. Install the ratchets as shown in **Figure 156**.

13A. On ATC70 models, install the washer and the set spring.

13B. On ATC90 and ATC110 models, install the ratchet springs (**Figure 157**).

14. Install the ratchet cover (**Figure 158**).

15. Install thrust washer and circlip (**Figure 159**).

NOTE

Make sure the circlip is seated correctly in the groove in the shaft.

16. Install the rope through the starter handle and tie the end using the same special knot as shown in **Figure 150**. Apply heat to the knot (a match is sufficient) and *slightly* melt the nylon rope. This will hold the knot securely.

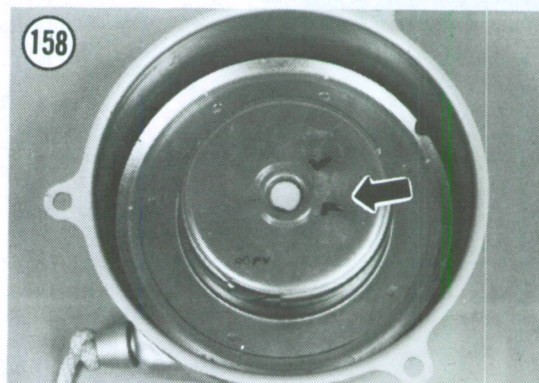
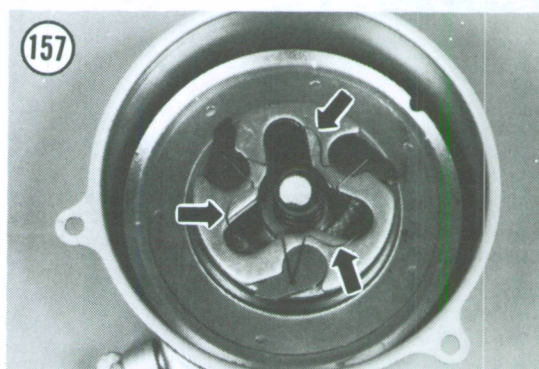
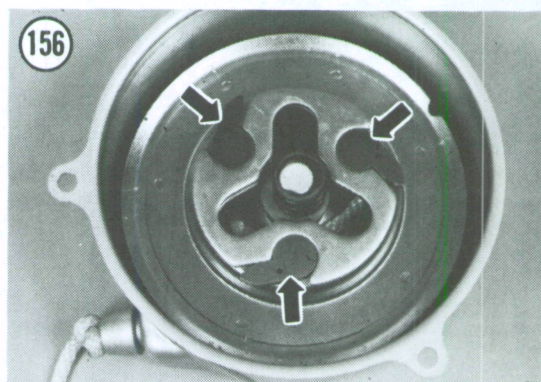
17. After assembly is complete, check the operation of the recoil starter by pulling on the starter handle. Make sure the drive pulley rotates freely and returns completely. Also make sure the ratchets move out and in correctly. If either does not operate correctly, disassemble and correct the problem.

18. Inspect the square holes in the starter pulley. If they are damaged in the area where the ratchets make contact it should be replaced.

RECOIL STARTER (125 CC)

Removal/Installation

1. Place the ATC on level ground and set the parking brake.
2. Shift the transmission into NEUTRAL and remove the gearshift lever.



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